

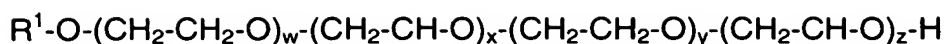
Claims

1. Solid dishwasher detergent, comprising
 - a) 1 to 40 wt.% bleaching agent,
 - b) 0.25 to 20 wt.% non-ionic surfactant(s);
 - c) 0.01 to 10 wt.% of at least one polymer with a molecular weight of 2000 g mol^{-1} or greater that possesses at least one positive charge,
 wherein the weight ratio of the component b) to component c) is between 25: 1 and 100: 1, preferably between 30: 1 and 80: 1 and particularly between 35: 1 and 75: 1.
2. Dishwasher detergent according to claim 1, comprising 1 to 35 wt.%, preferably 2.5 to 30 wt.%, particularly preferably 3.5 to 20 wt.% and particularly 5 to 15 wt.% bleaching agent, preferably sodium percarbonate.
3. Dishwasher detergent according to one of claims 1 or 2, comprising 0.5 to 15 wt.%, preferably 1 to 12.5 wt.%, particularly preferably 1.5 to 10 wt.% and particularly 2 to 8 wt.% non-ionic surfactant(s).
4. Dishwasher detergent according to one of claims 1 to 3, comprising non-ionic surfactant(s) of the general formula



in which R^1 stands for a linear or branched aliphatic hydrocarbon group with 4 to 18 carbon atoms or mixtures thereof, R^2 means a linear or branched hydrocarbon group with 2 to 26 carbon atoms or mixtures thereof and x stands for values between 0.5 and 1.5 and y stands for a value of at least 15.

5. Dishwasher detergent according to one of claims 1 to 4, comprising non-ionic surfactant(s) of the general formula



in which R^1 stands for a linear or branched, saturated or mono- or polyunsaturated C_{6-24} -alkyl or alkenyl group, each group R^2 or R^3 independently of one another is selected from $-CH_3$, $-CH_2CH_3$, $-CH_2CH_2-CH_3$, $CH(CH_3)_2$, and the indices w , x , y , z independently of one another stand for whole numbers from 1 to 6.

6. Dishwasher detergent according to one of claims 1 to 5, comprising non-ionic surfactant(s) of the general formula



in which R^1 stands for linear or branched, saturated or unsaturated, aliphatic or aromatic hydrocarbon groups with 1 to 30 carbon atoms, R^2 for linear or branched, saturated or unsaturated, aliphatic or aromatic hydrocarbon groups with 1 to 30 carbon atoms, which preferably contain 1 to 5 hydroxyl groups and preferably are also functionalized with an ether group, R^3 stands for H or a methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, 2-butyl or 2-methyl-2-butyl group, and x has a value between 1 and 40.

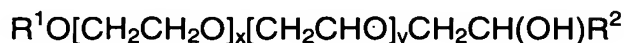
7. Dishwasher detergent according to one of claims 1 to 6, comprising non-ionic surfactant(s) of the general formula



which in addition to a group R^1 that stands for linear or branched, saturated or unsaturated, aliphatic or aromatic hydrocarbon groups with 1 to 30 carbon atoms, preferably 4 to 20 carbon atoms, additionally comprises a linear or branched, saturated or unsaturated, aliphatic or aromatic hydrocarbon group with 1 to 30 carbon atoms R^2 that is neighboring a

monohydroxylated intermediate group $-\text{CH}_2\text{CH}(\text{OH})-$ and in which x stands for a number between 1 and 40.

8. Dishwasher detergent according to one of claims 1 to 7, comprising non-ionic surfactant(s) of the general formula



in which R^1 and R^2 independently of one another stand for linear or branched, saturated or mono- or polyunsaturated hydrocarbon groups with 2 to 26 carbon atoms, R^3 independently of each other is selected from $-\text{CH}_3$, $-\text{CH}_2\text{CH}_3$, $-\text{CH}_2\text{CH}_2-\text{CH}_3$, $\text{CH}(\text{CH}_3)_2$, preferably $-\text{CH}_3$, however, and x and y independently of one another stand for values between 1 and 32, wherein surfactants with values for x from 15 to 32 and y from 0.5 and 1.5 are quite particularly preferred.

9. Dishwasher detergent according to one of claims 1 to 8, wherein the dishwasher detergent is present in the form of a preconditioned unit dose that comprises between 0.5 and 4 g, preferably between 0.8 and 3.5 g, particularly preferably between 1.0 and 3.0 g and particularly between 1.5 and 2.5 g non-ionic surfactant.
10. Dishwasher detergent according to one of claims 1 to 9, wherein the dishwasher detergent is present in the form of a preconditioned unit dose, wherein said preconditioned unit dose concerns a molded body, preferably a multiphase molded body, in particular a mono- or multiphase tablet with a filled cavity.
11. Dishwasher detergent according to one of claims 1 to 9, wherein the dishwasher detergent is present in the form of a preconditioned unit dose, wherein said preconditioned unit dose concerns a filled water-soluble

container, preferably a filled injection molded body, a filled casted body or a filled film pouch.

12. Dishwasher detergent according to one of claims 1 to 11, comprising 0.02 to 7.5 wt.%, preferably 0.05 to 5 wt.%, particularly preferably 0.07 to 2.5 wt.% and particularly 0.1 to 1 wt.% of at least one polymer with a molecular weight of 2000 g mol^{-1} or above, that possesses at least one positive charge.
13. Dishwasher detergent according to one of claims 1 to 12, wherein the polymer c) possesses monomer units of the formula $R^1R^2C=CR^3R^4$, in which each group R^1 , R^2 , R^3 , R^4 independently of each other is selected from hydrogen, derivatized hydroxyl groups, C1 to C30 linear or branched alkyl groups, aryl, aryl substituted C1-30 linear or branched alkyl groups, polyalkoxylated alkyl groups, heteroatomic organic groups having at least one positive charge without charged nitrogen, at least one quaternized nitrogen atom or at least one amino group with a positive charge in the pH range 2 to 11, or salts hereof, with the proviso that at least one group R^1 , R^2 , R^3 , R^4 is a heteroatomic organic group with at least one positive charge without charged nitrogen, at least one quaternized nitrogen atom or at least one amino group with a positive charge.
14. Dishwasher detergent according to one of claims 1 to 13, wherein the polymer c) comprises diallyldimethylammonium salts and/or acrylamidopropyltrimethylammonium salts as the monomer units.
15. Dishwasher detergent according to one of claims 1 to 14, wherein the proportion by weight of the component b) to the component c) is between 25: 1 and 100: 1, preferably between 28: 1 and 90: 1, particularly preferably between 33: 1 and 80: 1 and especially between 35: 1 and 70: 1.
16. Dishwasher detergent according to one of claims 1 to 15, comprising 10 to 80 wt.%, preferably 15 to 75 wt.%, particularly preferably 20 to 70 wt.% and particularly 25 to 65 wt.% of one or more water-soluble builders.

17. Use of a dishwasher detergent according to one of claims 1 to 16 for cleaning and rinsing glassware.